

Claims:

1. A graphical user interface (GUI) for interacting with a user during a workflow process, the GUI comprising:

a page including a plurality of interlinked nodes which graphically represent the structure of a plurality of interlinked steps of a stored workflow process;

data entry means for entering data relating to a particular selected node; wherein the node has a unique relationship with a step in the workflow process;

pathway means for determining a particular path through the workflow process using the entered data; and

means for graphically representing the resultant path through the workflow process in the page.

2. A GUI according to Claim 1, wherein the plurality of interlinked nodes represent a complete workflow process on a single page.

3. A GUI according to Claim 1 or 2, wherein each node represents an action, decision or result within the workflow process.

4. A GUI according to Claim 1, wherein the data entry means comprises presentation means for presenting data relevant to a location of the selected node within the plurality of interlinked nodes and selection means for enabling user selection of at least some of that data.

5. A GUI according to Claim 4, wherein the presentation means comprises a plurality of drop-down lists of location-specific information.

6. A GUI according to Claim 1, wherein the data entry means is arranged to use the entered data at a first node to determine further information required at a second node, linked to the first node.

7. A GUI according to Claim 1, further comprising updating means for updating any information related to the step in the workflow process with entered data.
8. A GUI according to Claim 1, further comprising means for converting the entered data into a classification code representing that data.
9. A GUI according to Claim 8, wherein the classification code comprises a standard classification code describing a complete range of possible data inputs relevant to the subject of the workflow process.
10. A GUI according to Claim 8, wherein the subject of the workflow process is clinical medical information and the classification code represents one of the group comprising a diagnosis, a symptom, an action, a treatment and an operative procedure.
11. A GUI according to Claim 1, further comprising analysing means for analysing the entered data and generating a list of actions associated therewith and listing means for listing the list of associated actions to the user adjacent the plurality of displayed interlinked nodes.
12. A GUI according to Claim 1, further comprising an information means provided at a node for presenting information associated with a node upon user selection.
13. A GUI according to Claim 12, wherein the information means comprises a graphical icon and user selection comprises interaction between a user navigational tool and the icon.
14. A GUI according to Claim 12, wherein the information means is arranged to provide a plurality of different levels of detail of information, in accordance with a user selection.
15. A GUI according to Claim 1, further comprising action list means for generating a list of actions and presenting the same to the user adjacent the plurality of displayed interlinked nodes, the action list means being arranged to determine the list from analysis of the user navigation through the plurality of interlinked nodes.

16. A GUI according to Claim 15, wherein the action list means is arranged, at the end of traversal of a plurality of interlinked nodes comprising the page, to present the list to the user with options for user confirmation of each action, and to determine the list of actions to be implemented from the user confirmation.
17. A GUI according to Claim 1, further comprising a note recordal means for recording user-generated textual note relating to a particular node, the note recordal means being arranged to link the note with the particular node such that the stored note is retrievable when the user has navigated to that particular node.
18. A GUI according to Claim 17, wherein the note recordal means is arranged to record a user-determined variation of the workflow process at a particular node.
19. A GUI according to Claim 17, further comprising feedback generation means for converting a user-determined note into a transmittable message and for transmitting the message to another user having access to a version of the GUI.
20. A GUI according to Claim 1, further comprising a new page linking means for linking a node at the end of a branch of the plurality of interlinked nodes within one page to a node within another different page.
21. A GUI according to Claim 20, wherein the new page linking means comprises a graphical icon and user selection comprises interaction between a user navigational tool and the icon.
22. A GUI according to Claim 1, wherein the GUI has access to an Electronic Patient Record Management System and the GUI further comprises an EPRMS management means for obtaining and presenting details of a selected electronic patent record in a portion of the page.
23. A GUI according to Claim 22, wherein the EPRMS management means further comprises population means for populating one or more nodes with at least some of the details of a selected electronic patent record, thereby reducing any required data entry at that node.

24. A GUI according to Claim 22, wherein the EPRMS management means is arranged to use the details of the selected electronic patient record to determine what information is required at a node from the user.
25. A GUI according to Claim 1, further comprising referral means for generating a referral message, the referral means being provided at a node and using information associated with the node to populate at least some of the referral message on user-selection.
26. A GUI according to Claim 25, wherein the referral means comprises a graphical icon and user selection comprises interaction between a user navigational tool and the icon.
27. A GUI according to Claim 25, wherein the referral means is arranged to use information obtained from an electronic patient record to populate automatically at least some of the referral message.
28. A GUI according to Claim 1, further comprising searching means for searching an externally accessible knowledge base, the searching means being arranged to convert a selected information topic into a predetermined classification code representing that topic and to transmit that classification code within an information request to the knowledge base for relevant information contained therein.
29. A GUI according to Claim 28, wherein the classification code comprises a standard classification code describing a complete range of possible data inputs relevant to the subject of the workflow process.
30. A GUI according to Claim 28, wherein the subject of the workflow process is clinical medical information and the classification code represents one of the group comprising a diagnosis, a symptom, an action, a treatment and an operative procedure.
31. A GUI according to Claim 28, wherein the searching means is arranged to receive a response to the information request and display the results of the search to the user.

32. A GUI according to Claim 28, wherein the searching means is arranged to receive a response to the information request and use the response to determine a relevant page of a plurality of pages for display to the user.
33. A GUI according to Claim 28, wherein the searching means is arranged to display a plurality of information topics to the user and to enable selection of at least some of these information topics, each information topic being related to the current node location of the user within the current page..
34. A GUI according to Claim 33, wherein the searching means is arranged to enable the user to enter additional information topics not displayed by the searching means.
35. A GUI according to Claim 1, further comprising editing means for editing the plurality of interconnected nodes on a page, the editing means being arranged to update the stored workflow to reflect any change made to the page.
36. A GUI according to Claim 35, wherein the editing means is arranged to enable a user to add a new node and to specify the contents of the new node.
37. A GUI according to Claim 35, wherein the editing means is arranged to enable a user to specify functionality associated with a node.
38. A GUI according to Claim 35, wherein the editing means is arranged to enable a user to add or edit a classification code associated with the contents of a node.
39. A GUI according to Claim 35, wherein the editing means is arranged to enable user-controlled positioning of the new node within the page and interconnection of the new node to the existing plurality of interconnected nodes.
40. A GUI according to Claim 1, further comprising recording means for recording user navigation through the plurality of interlinked nodes.
41. A GUI according to Claim 40, further comprising navigation analysis means for analysing the user navigation to determine the precise path taken through the workflow process.

42. A GUI according to Claim 41, wherein information relating to each step in the process is cost quantifiable and the navigation analysis means is arranged to determine a total cost of the path taken through the workflow process.

43. A GUI according to Claim 41, wherein the navigation analysis means is arranged to analyse the performance of the user through the workflow process.

44. A graphical user interface (GUI) for interacting with a user during a workflow process, the GUI comprising:

a map comprising a plurality of interlinked nodes which graphically represent the structure of a plurality of interlinked steps of a stored workflow process;

a data entry module for entering data relating to a particular selected node; wherein the node has a unique relationship with a step in the workflow process;

a pathway module for determining a particular path through the workflow process using the entered data; and

a display module for graphically representing the resultant path through the workflow process in the map.

45. A graphical user interface (GUI) for providing a user interface to a knowledge base storing a workflow process, the GUI comprising:

a page including a plurality of interlinked nodes which graphically represent the structure of a plurality of interlinked steps of the stored workflow process;

means for entering data relating to a particular selected node; wherein the node has a unique relationship with a step in the stored workflow process;

means for determining a particular path through the workflow process using the entered data; and

means for graphically representing the resultant path through the workflow process in the page.

46. A graphical user interface (GUI) for interacting with a user during a workflow process, the GUI comprising:

a plurality of pages representing a plurality of interrelated workflows, each page comprising a plurality of interlinked nodes which graphically represent the structure of a plurality of interlinked steps within a stored workflow process;

data entry means for entering data relating to a particular selected node; wherein the node has a unique relationship with a step in the workflow process

determining means for determining a particular path through the workflow process using the entered data; and

graphical means for graphically representing the resultant path through the workflow process in the page.

47. A method of interacting with a user during a workflow process using a graphical user interface (GUI), the method comprising:

generating a page of the GUI, the page comprising a plurality of interlinked nodes which graphically represent the structure of a plurality of interlinked steps of the workflow process;

entering data relating to a particular selected node; the node having a unique relationship with a step in the workflow process;

determining a particular path through the workflow process using the entered data; and

graphically representing the resultant path through the workflow process in the page.

48. A graphical user interface (GUI) for interacting with a user during a workflow process, the GUI comprising:

searching means for searching an externally accessible knowledge base, the searching means comprising:

conversion means for converting a selected information topic into a predetermined classification code representing that topic; and

transmission means for transmitting that classification code within an information request over a communications network to the knowledge base to access relevant information contained therein.

49. A GUI according to Claim 48, wherein the conversion means further comprises a local database of predetermined classification codes and an associated list of specific information topics which are each mapped to a specific classification code.

50. A GUI according to Claim 48, wherein the classification code comprises a standard classification code describing a complete range of possible data inputs relevant to the subject of the workflow process.

51. A GUI according to Claim 48, wherein the subject of the workflow process is clinical medical information and the classification code represents one of the group comprising a diagnosis, a symptom, an action, a treatment and an operative procedure.

52. A GUI according to Claim 51, wherein the classification code comprises a SNOMED code.

53. A GUI according to Claim 48, wherein the searching means is arranged to receive a response to the information request and display the results of the search to the user.

54. A GUI according to Claim 48, wherein the searching means is arranged to receive a response to the information request and use the response to determine a relevant part of the workflow process to display to the user.

55. A GUI according to Claim 48, wherein the searching means is arranged to display a plurality of information topics to the user and to enable selection of at least



some of these information topics, each information topic being related to a current user accessed part of the workflow process.

56. A GUI according to Claim 55, wherein the searching means is arranged to enable the user to enter additional information topics not displayed by the searching means.

57. A method of interacting with a user during a workflow process using a graphical user interface (GUI), the method comprising:

receiving a user instruction from the GUI to search an externally accessible knowledge base;

initiating a search of the knowledge base by:

converting a selected information topic into a predetermined classification code representing that topic; and

transmitting that classification code within an information request over a communications network to the knowledge base to access relevant information contained therein.

58. A graphical user interface (GUI) for interacting with a user during a workflow process, the GUI comprising:

a page including a plurality of interlinked nodes which graphically represent the structure of a plurality of interlinked steps of a stored workflow process;

editing means for editing the plurality of interlinked nodes; and

updating means for updating the plurality of interlinked steps of the stored workflow process with any corresponding changes made to the plurality of interlinked nodes.

59. A GUI according to Claim 58, wherein the editing means is arranged to enable a user to add a new node and to specify the contents of the new node.

60. A GUI according to Claim 58, wherein the editing means is arranged to enable a user to specify functionality associated with a node.

61. A GUI according to Claim 58, wherein the editing means is arranged to enable a user to add or edit a classification code associated with the contents of a node.

62. A GUI according to Claim 58, wherein the editing means is arranged to enable user-controlled positioning of the new node within the page and interconnection of the new node to the existing plurality of interconnected nodes.

63. A GUI according to Claim 58, wherein the subject of the workflow process is clinical medical information and the editing means is arranged to edit clinical information associated with a node.

64. A GUI according to Claim 58, wherein the editing means is arranged to edit administration information associated with a node.

65. A system for supporting distributed interaction with a user during a workflow process, the system comprising:

a centrally stored graphical representation of the workflow process,

a plurality of users located remotely from the centrally stored representation and related to each other in a user hierarchy, each user having access to a version of the representation;

referral means provided within each version of the representation to generate a referral message, the referral means being arranged to send the message to a reviewer in a next higher level in the user hierarchy.

66. A system according to Claim 65, wherein the referral means is arranged to receive a referral message from a user in a next lower level in the user hierarchy.

67. A system according to Claim 65, wherein the referral means comprises forwarding means arranged to enable a reviewer to forward the message onto another reviewer at a next higher level within the hierarchy if required.
68. A system according to Claim 65, wherein the referral means comprises response means enabling a reviewer to generate a message and send it to the referring user.
69. A system according to Claim 68, wherein the response means is arranged to specify a response to the feedback message which can be used to update a monitoring function.
70. A system according to Claim 69, wherein the monitoring function is accessible to all uses involved with the feedback message.
71. A system according to Claim 69, wherein the response means is arranged to specify a resolution to the feedback message, which can be used to update the monitoring function.
72. A system according to Claim 65, wherein the representation comprises a plurality of interlinked nodes which graphically represent the structure of a plurality of interlinked steps of the stored workflow process;
73. A system according to Claim 72, wherein the referral means is provided at a node of the representation and using information associated with the node to populate at least some of the referral message on user-selection.
74. A system according to Claim 65, wherein the referral means comprises a graphical icon and user selection comprises interaction between a user navigational tool and the icon.
75. A system according to Claim 65, wherein the referral means is arranged to use information obtained from an electronic patient record to populate automatically at least some of the referral message.

76. A system for distributing a new version of a graphical user interface (GUI) to a user, the system comprising:

a central store retaining a GUI representation of a workflow process;

a plurality of users located remotely from the central store and related to each other in a user hierarchy below the central store, each user having access to a version of a previous representation;

comparing means for comparing the new version of the representation with a user's previous version of the representation to determine any differences;

forwarding means for forwarding those differences to the user associated with that version of the representation for consideration; and

reviewing means provided within each previous version of the representation, the reviewing means being arranged to accept or reject the differences and to convey an acceptance or rejection to a higher level within the hierarchy.

77. A system according to Claim 76, wherein the reviewing means is arranged to accept some of the differences and to communicate the acceptance in part to a higher level within the hierarchy.

78. A system according to Claim 76, wherein the reviewing means is arranged to enable the user to carry out the acceptance in part of the differences manually.

79. A system according to Claim 76, wherein the GUI representation comprises a plurality of interlinked nodes which graphically represent the structure of a plurality of interlinked steps of the stored workflow process.

80. A system according to Claim 76, wherein each user has an associated permission which determines the degree of changes that can be accepted at their particular level in the hierarchy.

81. A system according to Claim 76, further comprising means for notifying each user of their position within the hierarchy and the permissions associated therewith.

82. A method of constructing a graphical user interface, the method comprising:

collating content regarding a particular workflow,

recording that content in a database as a series of steps of a hierarchically structured workflow, and

generating a graphical representation of the hierarchical workflow structure, which can be used to guide a user through the workflow; the graphical representation comprising a plurality of interlinked nodes where each node corresponds to a specific point within the hierarchical workflow structure.

83. A method according to Claim 82, wherein the generating step comprises generating a graphical representation comprising the plurality of interlinked nodes on a single page.

84. A method according to Claim 82, wherein the recording step comprises creating a workflow which commences with a fact in relation to one of a plurality of causes of the fact and the workflow steps provide a methodology to determine which of the plurality of causes is responsible for generating this fact.

85. A method according to Claim 82, wherein the workflow is a clinical diagnosis workflow, and the fact comprises a symptom and the cause of the fact comprises a medical condition.